Intel® Desktop Boards
BIOS Settings Dictionary – Alphabetical

The BIOS Setup program can be used to view and change the BIOS settings for the computer. The BIOS Setup program is accessed by pressing the <F2> key after the Power-On Self-Test (POST) memory test begins and before the operating system boot begins. The following menus are available:

Menu Title	Purpose
Maintenance	Clears passwords and displays processor information. *The maintenance menu is displayed only when the Desktop Board is in configure mode.*
Manageability	Configure options associated with Intel® Platform Administration Technology.
Main	Displays processor and memory configuration.
Advanced	Configures advanced features available through the chipset.
Security	Sets passwords and security features.
Power	Configures power management features and power supply controls.
Boot	Selects boot options.
Intel® ME	Configures options for the Intel® Management Engine and Intel® Active Management Technology.
Exit	Saves or discards changes to Setup program options.

The presence of menus and BIOS settings are dependent on your board model, hardware components installed, and the BIOS version. BIOS menu titles may differ.

If any problems occur after making BIOS settings changes (poor performance, intermittent issues, etc.), reset the desktop board to default values:

1. During boot, enter the BIOS setup by pressing F2.
2. Press F9 to set defaults.
3. Press F10 to Save and Exit.

If the system locks or won't boot after making BIOS settings changes, perform a BIOS recovery as described at http://support.intel.com/support/motherboards/desktop/sb/CS-023360.htm.

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BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
+1.5Vin	Advanced > Hardware Monitoring	No changeable options	Displays voltage level of the +1.5V in supply
+12Vin or 12V Voltage	Advanced > Hardware Monitoring	No changeable options	Displays voltage level of the +12V in supply
+3.3Vin	Advanced > Hardware Monitoring	No changeable options	Displays voltage level of the +3.3V in supply
+5Vin or 5V Voltage	Advanced > Hardware Monitoring	No changeable options	Displays voltage level of the +5V in supply
1394 *This BIOS setting is present only on Intel® Desktop Boards that include IEEE 1394.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Disables or enables IEEE 1394 support
1st ATAPI CD-ROM Drive *This boot device submenu is present only if at least one boot device of this type is installed. This list will display up to four ATAPI CD-ROM drives, the maximum number of ATAPI CD-ROM drives supported by the BIOS.*	Boot > ATAPI CD-ROM Drives	Dependent on installed ATAPI CD-ROM drives	Specifies the boot sequence from the available ATAPI CD-ROM drives. To specify boot sequence: 1. Select the boot device with <↑> or <↓>. 2. Press <Enter> to set the selection as the intended boot device.
1st Boot Device	Boot > Boot Device Priority	• Removable Device • Hard Drive • ATAPI CD-ROM • Network • Disabled	Specifies the boot sequence from the available devices. To specify boot sequence: 1. Select the boot device with <↑> or <↓>. 2. Press <Enter> to set the selection as the intended boot device. The operating system assigns a drive letter

1st Hard Disk Drive *This boot device submenu appears only if at least one boot device of this type is installed. This list will display up to 12 hard disk drives, the maximum number of hard disk drives supported by the BIOS.*	Boot > Hard Disk Drives	Dependent on installed hard drives	Specifies the boot sequence from the available hard disk drives. To specify boot sequence: 1. Select the boot device with <↑> or <↓>. 2. Press <Enter> to set the selection as the intended boot device.
1st Removable Device *This boot device submenu is present only if at least one boot device of this type is installed. This list will display up to four removable devices, the maximum number of removable devices supported by the BIOS.*	Boot > Removable Devices	Dependent on installed removable devices	Specifies the boot sequence from the available removable devices. To specify boot sequence: 1. Select the boot device with <↑> or <↓>. 2. Press <Enter> to set the selection as the intended boot device.
2nd Boot Device	Boot > Boot Device Priority	• Removable Device • Hard Drive • ATAPI CD-ROM • Network • Disabled	Specifies the boot sequence from the available devices. To specify boot sequence: 1. Select the boot device with <↑> or <↓>. 2. Press <Enter> to set the selection as the intended boot device. The operating system assigns a drive letter
3rd Boot Device	Boot > Boot Device Priority	• Removable Device • Hard Drive • ATAPI CD-ROM • Network • Disabled	Specifies the boot sequence from the available devices. To specify boot sequence: 1. Select the boot device with <↑> or <↓>. 2. Press <Enter> to set the selection as the intended boot device. The operating system assigns a drive letter
4th Boot Device	Boot > Boot Device Priority	• Removable Device • Hard Drive • ATAPI CD-ROM • Network • Disabled	Specifies the boot sequence from the available devices. To specify boot sequence: 1. Select the boot device with <↑> or <↓>. 2. Press <Enter> to set the selection as the intended boot device. The operating system assigns a drive letter

A

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Access Level	Maintenance	No changeable options	Displays the current user's access level.
Access Mode	Advanced > Drive Configuration	• CHS • LBA • Large • Auto	Allows you to select the sector addressing mode. **CHS** (cylinder, head, sector) mode supports up to 528 MB hard disks. **LBA** (logical block addressing) mode supports hard disks up to 128 GB in size. **Large** mode supports hard disks above 528 MB in size, but does not support LBA mode.
ACPI	Power	No changeable options	Opens the sub-menu for ACPI (Advanced Configuration and Power Interface).
ACPI Suspend Mode (or ACPI Suspend State)	Power > ACPI	• S1 State • S3 State	Specifies the ACPI sleep state.
Additional System Information	Main	No changeable options	Displays information such as System Information, Desktop Board Information, Chassis Information, etc.
AddOn ROM Display Mode	Boot	• Enabled • Disabled	**Enabled**: the logo screen will be followed by the "AddOn ROM" initial screen (the screen showing the add-on card BIOS message). **Disabled:** no "Add-On ROM" screen is followed.
After Power Failure	Power	• Stay Off • Last State • Power On	Determines the mode of operation if a power loss occurs. **Stay Off** keeps the power off until the power button is pressed. **Last State** restores the previous power state before power loss occurs. **Power On** restores power to the computer.
Agent	Manageability	• Enable • Disable	By default, Intel® Platform Administrator Agent is disabled. To enable the agent, select **Enable**.
AGP/PCI Burn-in Mode	Advanced > Chipset Configuration > Burn-in Mode	• Default • 63.88/31.94 MHz • 68.05/34.02 MHz • 69.44/34.72 MHz • 70.83/35.41 MHz • 72.22/36.11 MHz • 73.60/36.80 MHz	Enables the selection of specific AGP/PCI clock frequencies. The host clock (system bus speed) is not changed. If this option is set to anything other than Default, the Host and I/O Burn-In Mode is automatically set to Default.
Alternate DNS Address	Intel® ME > Intel® Active Management Technology Configuration > TCP/IP Configuration	User defined	Enter the address in dot-decimal notation.

Ambient Air Temperature *This BIOS setting is present only on certain BTX form factor Intel® Desktop Boards.*	Advanced > Hardware Monitoring	No changeable options	Displays the temperature near the remote thermal diode on BTX form factor boards.
Aperture Size	Advanced > Video Configuration	• 4MB • 8MB • 16MB • 32MB • 128MB • 256MB Options may vary depending on board model.	Amount of system memory available for direct access by the graphics device.
APM	Power > APM	• Enabled • Disabled	Disables or enables APM (Advanced Power Management).
ASF Support	Advanced > Peripheral Configuration or Advanced > Boot Configuration or Advanced > Management Configuration	• Enabled • Disabled or • Automatic • Manual - User Defined • Disabled	Disables or enables Alert Standard Format (ASF). For more information, refer to http://www.intel.com/support/motherboards/desktop/sb/cs-010502.htm
ATA/IDE Configuration	Advanced > Drive Configuration	• Disabled • Legacy • Enhanced (or Native)	Specifies the integrated IDE controller. **Disabled** disables the integrated IDE controller. **Legacy** enables up to two IDE channels for OS requiring legacy IDE operation. **Enhanced** (or Native) enables all SATA and PATA resources.
ATAPI CD-ROM Drives	Boot	No changeable options	Opens the ATAPI CD-ROM Drive sub-menu where you may specify the boot sequence from the available ATAPI CD-ROM drives.
Audio *This BIOS setting is present only on Intel® Desktop Boards that include onboard audio.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables onboard audio.
Automatic Fan Detection	Advanced > Fan Control	• Next Boot • Disable • Always	**Next Boot**: Will detect fan(s) added to the motherboard upon next boot only. **Disabled**: Will NOT detect fan(s) added to the motherboard, new fans may perform erratically. **Always**: Will detect fan(s) added to the motherboard, may cause a slight delay and increased noise during startup.

Aux Fan Speed or Auxiliary Fan	Advanced > Hardware Monitoring	No changeable options	Displays aux fan speed.
Auxiliary Power *This BIOS setting is present only on Intel® Desktop Boards that include an onboard auxiliary power connector.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables on the onboard auxiliary power connector.

B

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Base I/O Address *(for the Parallel Port)* *This BIOS setting is present only when Parallel Port is set to Enabled*	Advanced > Peripheral Configuration	• 378 • 278	Specifies the base I/O address for the parallel port, if Parallel Port is Enabled.
Base I/O Address *(for the Serial Port)* *This BIOS setting is present only when Serial Port A is set to Enabled*	Advanced > Peripheral Configuration	• 3F8 • 2F8 • 3E8 • 2E8	Specifies the base I/O address for serial port A if serial port A is enabled.
BIOS Version	Main	No changeable options	Displays the version of the BIOS currently installed on the PC.
Block Mode	Advanced > Drive Configuration > SATA/PATA	• Disabled • Auto	Check the hard disk drive's specifications for optimum setting.
Board ID	Maintenance	No changeable options	Value that uniquely identifies the SKU of the board.
Boot Device Priority	Boot	No changeable options	Opens the Boot Device Priority sub-menu where you may specify the boot sequence from the available types of boot devices.
Boot Drive Order	Boot	Dependent on installed bootable devices	Allows you to specify the boot sequence from the available types of boot devices.
Boot Menu Type	Boot	• Normal • Advance	**Normal** allows you to set boot priority based on type of device. **Advanced** allows you to set boot priority for each device regardless of category
Boot to Network	Boot	• Enabled • Disabled	Disables or enables booting from the network.
Boot to Optical Devices	Boot	• Enabled • Disabled	Disables or enables booting from optical devices (CD/DVD).
Boot to Removable Devices	Boot	• Enabled • Disabled	Disables or enables booting from removable devices.

Boot USB Devices First	Boot	• Enabled • Disabled	Sets USB devices to be first in boot order.
Bound to Server *If the client is bound to a server, this option will display the server's IP address in this format:* ***Bound to Server: xxx.xxx.xxx.xxx***	Manageability	• Yes • No	This BIOS option is changeable ONLY when the system is bound to a server. Select **No** to release the client/server binding. When the binding is no longer applicable, for example if the system has crashed or the server has been changed, you need to release the client/server binding, otherwise the client will be unable to be managed by another server.
Burn-In Mode	Advanced > Chipset Configuration	• Default • -2.0% • -1.0% • +1.0% • +2.0% • +3.0% • +4.0%	Alters host and I/O clock frequencies. **Warning**: This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of the system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values.

C

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
C1E	Maintenance	• Enabled • Disabled	Allows the system to change voltage level (lower) of processor when no work is being done.
Cable Detected *This BIOS setting is present only if an IDE device is installed.*	Advanced > Drive Configuration > SATA/PATA	No changeable options	Displays the type of cable connected to the IDE interface: 40-conductor or 80-conductor (for ATA-66/100 devices) or Serial ATA.
CD/DVD Drive Order	Boot	Lists all installed CD/DVD devices	Allows you to set the boot order of CD/DVD drives (used when Boot Menu type is set to normal)
CD-ROM Boot Priority	Boot	Lists all installed CD-ROM devices	Allows you to set the boot order of CDROM drives
Change Intel® Management Engine Password	Intel® ME	User defined	Intel® ME password must be changed from the default password prior to gaining access to other ME options. Intel® ME passwords must be between 8 and 32 characters long, have at least one upper case character, one lower case character, one number, and a special character (for example: !, @, #, $, %, ^, &, *). The system owner should document the new Intel ME password, store it in a secured location (a vault, safe deposit box, or off-site storage), and have it available for future use. This document should be updated after any password change is made.
Chassis Fan Speed	Advanced > Hardware Monitoring	No changeable options	Displays chassis fan speed
Chassis Inlet Fan	Advanced > Hardware Monitoring	No changeable options	Displays front chassis fan speed
Chassis Intrusion	Security	• Enabled • Disabled	Enables or disables the chassis intrusion feature.

Chassis Outlet Fan	Advanced > Hardware Monitoring	No changeable options	Displays rear chassis fan speed
Clear All DMI Event Log	Advanced > Event Log Configuration	• Yes • No	**Yes** - the DMI Event Log will be cleared at next POST stage and then this option automatically resets to No.
Clear All Passwords	Maintenance	Selecting this option clears the passwords.	Clears both the user and supervisor passwords.
Clear Event Log	Advanced > Event Log Configuration	• Enabled • Disabled	**Enable** discards all events in the event log and will reset the option to **disable** upon exiting BIOS.
Clear Trusted Platform Module *This BIOS setting is present only on Intel® Desktop Boards that include support for Trusted Platform Module (TPM).*	Maintenance	• OK • Cancel	Used to clear the TPM if you are transferring ownership of the platform to a new owner. For more information, refer to your Trusted Platform Module Quick Reference Guide.
Clear User Password *This BIOS setting is present only if a user password has been set.*	Security	Selecting this option clears the password.	Clears the user password.
Compatibility Mode	Intel® ME > Intel® Active Management Technology Configuration > Provisioning Configuration	• Intel® AMT Generation 2.0 • Intel® AMT Generation 1.0	Depending on the 3rd party management software that is chosen to be used with this system (if any), set the Compatibility Mode appropriate to the management software.
Compliance Test Pattern	Advanced > PCI Express Configuration	• Enabled • Disabled	Used for making sure a PCI Express slot remains functional and enabled per PCI Express specification for Compliance test card testing of PCI Express cards.
Computer Name	Intel® ME > Intel® Active Management Technology Configuration	User defined	Sets the computer name. The computer name must be between 1 and 32 characters long, may contain upper case characters, lower case characters numbers, however spaces, dashes, and any other special characters (for example: !, @, #, $, %, ^, &, *) are not allowed.
Configure SATA as…	Advanced > Drive Configuration	• IDE • RAID • AHCI	**IDE** is default **RAID:** enables RAID which may require you to install the RAID Driver during OS installation **AHCI**: allows you to take advantage of Advanced Host Controller Interface features such as Native command Queuing , Hot plug, etc., without the option to use RAID. Requires a hard drive that supports AHCI.
Core Multiplexing Technology *This BIOS setting is present only when a dual core processor is installed.*	Main	• Enabled • Disabled	When disabled, turns off all but one processor core. You may need to disable this for legacy operating systems that do not support multiple cores. The remaining core may have access to more cache. The amount of cache available to the remaining core will depend on the particular processor. The increase in available cache can result in better performance under certain applications.

CPC Override	Advanced > Chipset Configuration or Advanced > Memory Configuration	• Auto • Enabled • Disabled	Controls Command Per Clock/1n rule mode. When enabled, allows DRAM controller to attempt Chip Select assertions in two consecutive common clocks.
CPU Cooling Fan	Advanced > Hardware Monitoring	No changeable options	Displays fan speed of the CPU fan
CPU Die/Package Temperature	Advanced > Hardware Monitoring	No changeable options	Displays processor's temperature.
CPU Fan Control	Advanced > Boot Configuration	• Enabled • Disabled	Allows the CPU fan to be controlled in order to optimize acoustics. If disabled, the CPU fan will run at 100%.
CPU Fan Speed	Advanced > Hardware Monitoring	No changeable options	Displays processor fan speed
CPU Frequency Multiplier *This BIOS setting is present only when Default Frequency Ratio is disabled.*	Maintenance	User Defined	Sets the ratio between CPU Core Clock and the Front Side Bus (FSB)
CPU Microcode Update Revision	Maintenance	No changeable options	Displays processor's Microcode Update Revision.
CPU Stepping Signature	Maintenance	No changeable options	Displays processor's Stepping Signature.
CPU Temperature	Advanced > Hardware Monitoring	No changeable options	Displays processor's temperature.
CPU Thermal Module Fan	Advanced > Hardware Monitoring	No changeable options	Displays fan speed of the CPU fan
CPU Voltage Offset	Performance > Processor Overrides	• Enabled • Disabled	When enabled, will provide 300 mV additional voltage to CPU above selected CPU Voltage Override
CSA Device	Advanced > Chipset Configuration	• Auto • Disable	Enables or disables Communication Streaming Architecture interface. **Auto** leaves the CSA device enabled if a device is found on the bus, else the device is disabled. For more information, refer to http://www.intel.com/design/network/papers/25245102.pdf

D

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
DDR2 Voltage	Advanced > Chipset Configuration > Memory Configuration	• Automatic • 1.8 • 1.9	Memory voltage will be adjusted according to the memory detected. Memory voltage can also be manually set to allow memory to function or achieve higher performance.

Default Frequency Ratio	Maintenance	• Enabled • Disabled	**Enabled** uses processor default frequency ratio. **Disabled** allows programming of frequency ratio.
Default Gateway *This setting editable only if Obtain an IP Automatically is set to **No**.*	Manageability	<Enter>	Press <Enter> to edit the default gateway for the client system.
DHCP Enabled	Intel® ME > Intel® Active Management Technology Configuration > TCP/IP Configuration	[X] [ ]	Toggle the checkbox (with the Enter key or the Space bar) to enable or disable DHCP.
Disable Disk Protection	Manageability	<Enter>	Only allowed if disk protection is enabled.
Discard Changes	Exit	No changeable options	Discards changes without exiting Setup. The option values present when the computer was turned on are used.
Disk Protection is <enabled or disabled >	Manageability	No changeable options	Displays whether disk protection is enabled or disabled. Hard Disk Protection is enabled by default after installing Intel® Platform Administrator Client. With Hard Disk Protection enabled, the client computer can save a copy of the current OS image for recovery purpose. This copy enables recovering a crashed client to a previously saved state.
Diskette Controller	Advanced > Diskette Configuration	• Enabled • Disabled	Configures the integrated floppy controller.
Diskette Write Protect	Advanced > Diskette Configuration	• Enabled • Disabled	Disables or enables diskette drive write protection.
Display Setup Prompt	Advanced > Boot Configuration	• On • Off	Displays the "F2 to enter BIOS setup" message during boot.
DMA Mode	Advanced > Drive Configuration > SATA/PATA	• Auto • SWDMA 0 • SWDMA 1 • SWDMA 2 • MWDMA 0 • MWDMA 1 • MWDMA 2 • UDMA 0 • UDMA 1 • UDMA 2 • UDMA 3 • UDMA 4 • UDMA 5	Specifies the Ultra DMA mode for the drive.
DMI Event Log	Advanced > Event Log Configuration	• Enabled • Disabled	Enable or disable the storing of POST error messages to the DMI Event Log.
Domain Name	Intel® ME > Intel® Active Management Technology Configuration > TCP/IP Configuration	User defined	Sets the domain name.

Drive A	Advanced > Floppy Configuration	• None • 360, 5.25 in. • 1.2, 5.25 in. • 720, 3.5 in. • 1.44, 3.5 in.	Selects the floppy drive type.
Drive Installed	Advanced > Drive Configuration > SATA/PATA	No changeable options	Displays the type of drive installed.
Dual Core		• Enabled • Disabled	Enables or disables dual core processing.
DVMT Mode	Advanced > Video Configuration	• DVMT • Fixed • Both	Dynamic Video Memory Technology **DVMT** mode is memory that is dynamically allocated based on memory requests made by application and are released back to the system once the requesting application has been terminated. **Fixed** mode is non-contiguous page locked memory allocated during driver initialization to provide a static amount of memory. **Both** allows the combination of both Fixed and DVMT type driver allocation methods, used to guarantee a minimum amount of memory but give the flexibility of DVMT allocation scheme and performance enhancement. These mode options will ensure that a certain minimum amount of memory will always be dedicated to graphics. For additional information, refer to the Intel® Graphics Media Accelerator 900 White Paper at http://www.intel.com/design/chipsets/applnots/30262403.pdf.

E

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
ECC Event Logging	Advanced > Event Log Configuration	• Enabled • Disabled	Enables or disables event logging of ECC events.
ECP Mode Use DMA	Advanced > Peripheral Configuration	No changeable options	By default, Channel 3 is used.
EIST	Power	• Enabled • Disabled	Speedstep technology: Advanced Power management which includes Frequency and voltage
Energy Lake	Power	• Enabled • Disabled	Disables or enables Energy Lake power management technology. Energy Lake technology introduces two main end-user features: the “Consumer Electronics” (CE)-like device power behavior, and maintaining system state and data integrity during power loss events).
Enhanced Consumer IR	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables consumer infrared communication feature.
Enter AMT BX Setup	Advanced > Management Configuration	• Enabled • Disabled	Allows AMT BIOS Extensions Setup to be entered on next boot up.

Event Log	Advanced > Event Log Configuration	No changeable options	Indicates if there is space available in the event log.
Event Log Capacity	Advanced > Event Log Configuration	No changeable options	Indicates if there is space available in the event log.
Event Log Validity	Advanced > Event Log Configuration	No changeable options	Indicates of the event log information is valid.
Event Logging	Advanced > Event Log Configuration	• Enabled • Disabled	Enables or disables tracking occurrences during system boot.
Exit Discarding Changes	Exit	No changeable options	Exits without saving any changes made in the BIOS Setup program.
Exit Saving Changes	Exit	No changeable options	Exits and saves the changes in CMOS SRAM.
Expansion Card Text	Security	• Enabled • Disabled	Displays add in Option ROM text
Extended Burn-in Mode	Advanced > Chipset Configuration > Burn-in Mode	• Enabled • Disabled	Enabling this option allows the user to select additional values for system performance margining. **Warning:** This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of the system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values.
Extended Configuration	Advanced > Chipset Configuration	• Default • User Defined	Chooses the default or user defined settings for the extended configuration options.
Extended IDE Drive	Advanced > Drive Configuration	• None • Auto	**Auto**: automatically detects a SATA hard disk drive. If automatic detection is successful, values for the drive specifications are automatically filled in.

F

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Fan Control	Advanced > Fan Control Configuration	• Enabled • Disabled	Disables or enables system fan control.
First SATA Master	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this SATA channel. Shows [None] if no drive is installed.
Fixed Disk Boot Sector	Maintenance	• Normal • Write Protect or • Enable • Disable	Boot sector VIRUS protection
Floppy A	Advanced > Diskette Configuration	• Disabled • 360 KB 5¼” • 1.2 MB 5¼” • 720 KB 3½” • 1.44 MB 3½” • 2.88 MB 3½”	Selects the floppy drive type.
Floppy Type	Advanced > Floppy Configuration	• 1.44MB • 2.88MB	Selects the floppy drive type.

Force On-board LAN Disable *This BIOS setting is present only on boards supporting Intel® Active Management Technology.*	Maintenance	• Enabled • Disabled	Forces onboard LAN and all Active Management Technology features to disabled.
Fourth SATA Master	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this SATA channel. Shows [None] if no drive is installed.
Frame Buffer Size	Advanced > Video Configuration	• 1 MB • 8 MB • 16 MB *Options may vary depending on board model.*	Sets the frame buffer size. Frame buffer size is the total amount of system memory locked by the BIOS for video. A larger frame buffer size should result in higher video performance.
Front Fan Speed	Advanced > Hardware Monitoring	No changeable options	Displays front fan speed.
Front Panel 1394 Port 1 *This BIOS setting is present only on Intel® Desktop Boards that include front panel IEEE 1394 capability.*	Advanced > Peripheral Configuration	• 1394A • 1394B	Sets the IEEE 1394 mode for the front panel 1394 Port.
Front Panel 1394 Port 2 *This BIOS setting is present only on Intel® Desktop Boards that include front panel IEEE 1394 capability.*	Advanced > Peripheral Configuration	• 1394A • 1394B	Sets the IEEE 1394 mode for the front panel 1394 Port.
Front Side Bus (FSB) Frequency	Main	No changeable options	Displays the Front Side Bus (FSB) Frequency

G

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Gateway Address	Intel® ME > Intel® Active Management Technology Configuration > TCP/IP Configuration	User defined	Enter the address in dot-decimal notation.

H

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Halt On	Boot	• All Errors • No Errors • All, But Keyboard	Used to configure what types of POST errors will halt the system boot.
Hard Disk Boot Priority	Boot	Lists all installed hard drive devices	Allows you to set the boot order of hard drives
Hard Disk Drives	Boot	No changeable options	Opens the Hard Disk Drives sub-menu where you may specify the boot sequence from the available hard disk drives.
Hard Disk Pre-Delay	Advanced > Drive Configuration	• Disabled • 3 Seconds • 6 Seconds • 9 Seconds • 12 Seconds • 15 Seconds • 21 Seconds • 30 Seconds	Causes the BIOS to insert a delay before attempting to detect IDE drives in the system.
Hard Drive	Power > APM	• Enabled • Disabled	Enables power management for hard disks during APM standby mode.
Hard Drive Order	Boot	Lists all installed hard drive devices	Allows you to set the boot order of hard drives (used when Boot Menu type is set to normal)
HD Audio Link and BP/FP Audio out	Advanced > Peripheral Configuration	• Enable Both • Disable Both • Disable Only BP/FP Audio	Enable Both: Allow audio output to both the Back Panel/Front Panel and HD Audio Link Disable Both: Dsiable both audio out streams Disable Only BP/FP Audio: Only HD audio content through the HD Audio Link
HDD S.M.A.R.T. Capability	Advanced > Drive Configuration	• Enabled • Disabled	Enable or Disable support for the hard disk's S.M.A.R.T. (Self Monitoring Analysis And Reporting Technology) capability. S.M.A.R.T. is supported by all current hard disks and allows the early prediction and warning of impending hard disk failures. You should enable it if you want to use S.M.A.R.T.-aware utilities to monitor the hard disk's condition.
HDD Self Diagnostic	Advanced > Boot Configuration	• Enabled • Disabled	Enables or disables Self-Monitoring Analysis and Reporting Technology (SMART).
High Definition Front Panel Audio *This BIOS setting is present only on Intel® Desktop Boards that include High Definition Audio.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables High Definition Front Panel Audio
High Precision Timer	Advanced > Chipset Configuration	• Enabled • Disabled	Enables or disables HPET (High Precision Event Timer) support. For more information, refer to http://www.intel.com/technology/architecture/hpetspec.htm.
High Speed USB	Advanced > USB Configuration	• Enabled • Disabled	Disable this option when a USB 2.0 driver is not available.

Host Burn-in Mode	Advanced > Chipset Configuration > Burn-in Mode	• Default • -2.0% • -1.0% • +1.0% • +2.0% • +3.0% • +4.0% • +5.0% • +6.0% • +7.0% • +8.0% • +9.0% • +10.0%	This setting alters host clock frequencies. **Warning:** This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of the system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values.
Host Burn-in Mode Percentage	Advanced > Chipset Configuration > Burn-in Mode	Options are dependent on board and processor models; may be set up to 30%.	Allows you to change the speed of the processor in terms of percentage; either positive or negative.
Host Burn-in Mode Type	Advanced > Chipset Configuration > Burn-in Mode	• Positive • Negative	Reads the percentage set in Host Burn-in Mode Percentage as either a positive number (increases speed) or a negative number (decreases speed).
Host Spread Spectrum	Advanced > Chipset Configuration	• Down • Center	Adjust the mean frequencies for core system clocks. Requires additional POST time.
HPET	Advanced > Chipset Configuration or Performance > Bus Overrides	• Enabled • Disabled	Enables or disables HPET (High Precision Event Timer) support. For more information, refer to http://www.intel.com/technology/architecture/hpetspec.htm.
Hyper-Threading Technology *This BIOS setting is present only on Intel® Desktop Boards that support Hyper-Threading Technology if a processor supporting Hyper-Threading Technology is installed.*	Main	• Enabled • Disabled	Enables or disables Hyper-Threading Technology.

I

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
ICH Temperature	Advanced > Hardware Monitoring	No changeable options	Displays temperature in the ICH zone. *Refer to the board's Technical Product Specification for the exact location of this sensor.*
IDE Auto-Detection	Advanced > Drive Configuration	No changeable options	Pressing Enter auto-detects the specs of the drive (size, cylinders, heads, etc.)

Idle Time Out	Intel® ME > Intel® Management Engine Configuration	User defined	A value between **0** and **65535**. Sets the number of minutes of idle time before Intel® ME will sleep. Default value is 0. With this setting, Intel® ME will not sleep, with no power savings. *This option is present only if "Turn on Intel® ME in Sleep States" is enabled.*
IGD Aperture Size	Advanced > Video Configuration	• 4MB • 8MB • 16MB • 32MB • 128MB • 256MB Options may vary depending on board model.	Establishes the maximum amount of system memory that the Operating System can use for video memory. This is primarily used for buffering textures for the AGP video device.
IGD DVMT Memory	Advanced > Video Configuration	• 32MB • 64 MB • 128 MB • Maximum DVMT	Intel Dynamic Video Memory Technology 3.0 (DVMT 3.0) allows additional memory to be allocated for graphics usage based on application need. Once the application is closed, the memory that was allocated for graphics usage is then released and made available for system use. **Maximum DVMT** allows up to 224 MB of memory to be allocated for graphics.
Inactivity Timer	Power > APM	• Off • 1 Minute • 5 Minutes • 10 Minutes • 20 Minutes • 30 Minutes • 60 Minutes • 120 Minutes	Specifies the amount of time before the computer enters APM standby mode.
Intel Enhanced Debug	Maintenance	• Enabled • Disabled	Processor option RECOMMENDED by the Netburst BIOS writer's guide for allowing operating system level debug of system issues that may be processor related.
Intel Rapid BIOS Boot	Boot	• Enabled • Disabled	Allows BIOS to skip certain tests while booting.
Intel® AMT IDER Operation *This BIOS setting is present only on D945G boards supporting Intel® Active Management Technology.*	Advanced > Management Configuration	• Enabled • Disabled	Enables or disables IDE Redirect (IDER).

Intel® AMT SOL Operation *This BIOS setting is present only on D945G boards supporting Intel® Active Management Technology.*	Advanced > Management Configuration	• Automatic • Enabled • Disabled	Allows Serial Over LAN (SOL) to be forced enabled or disabled. Rate is set to115200 baud.
Intel® ME After Power Failure	Intel® ME > Intel® Management Engine Configuration	• Power On • Stay Off	Determines mode of operation if power loss occurs. **Stay Off**: Intel® ME will remain off once power is restored. **Power On**: Restores ME to the power on state.
Intel® Quick Resume Technology *This BIOS setting is present only on boards supporting Intel® Viiv˜ Technology.*	Power	• Enabled • Disabled	Enables or disables Intel® Quick Resume Technology. For more information, refer to http://support.intel.com/support/entertainment/viiv/qrt.htm.
Intel® RAID Technology *This BIOS setting is present only on Intel® Desktop Boards that include support for RAID.*	Advanced > Drive Configuration	• Enabled • Disabled	Enables or disables Intel® RAID technology. If you plan on configuring your system for Intel® Matrix Storage Technology, enable this setting before installing your operating system. For additional information, refer to http://support.intel.com/support/motherboards/desktop/sb/CS-012075.htm.
Intel® VT for Directed I/O (VT-d)	Security	• Enabled • Disabled	Enables or disables Intel® VT for Directed I/O. For more information, refer to http://www.intel.com/technology/magazine/45nm/vtd-0507.htm
Internal Temp	Advanced > Hardware Monitoring	No changeable options	Reads the thermal sensor in the Heceta chip itself
Interrupt *(for the Parallel Port)* *This BIOS setting is present only when Parallel Port is set to Enabled*	Advanced > Peripheral Configuration	• IRQ 5 • IRQ 7	Specifies the interrupt for the parallel port, if Parallel Port is Enabled.
Interrupt *(for the Serial Port)* *This BIOS setting is present only when Serial Port A is set to Enabled*	Advanced > Peripheral Configuration	• IRQ 3 • IRQ 4	Specifies the interrupt for serial port A if serial port A is enabled.
IOAPIC Enable	Advanced > Chipset Configuration	• Enabled • Disabled	Enables or disables I/O Programmable Interrupt Controller.

IP Address *This setting editable only if Obtain an IP Automatically is set to **No**.*	Manageability or Intel® ME > Intel® Active Management Technology Configuration > TCP/IP Configuration	User defined	Press <Enter> to edit the IP address for the client system.
ISA Enable Bit	Advanced > Chipset Configuration	• Enabled • Disabled	Some older expansion devices require this to be enabled.

K

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Keyboard Select	Power	• Disable • Keyboard 1	Select Keyboard 1 to allow a PS/2 keyboard to wake the system from the S5 state.

L

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
L2 Cache RAM	Main	No changeable options	Displays the size of second-level processor cache.
Language	Main	• English • French	Selects the current default language used by the BIOS.
LBA Mode Control *This BIOS setting is present only if an IDE device is installed.*	Advanced > Drive Configuration > SATA/PATA	No changeable options	Specifies LBA mode control.
Legacy Front Panel Audio	Advanced > Peripheral Configuration	• Enabled • Disabled	When enabled, the system assumes that a High Definition audio connector is not present in the system (Legacy audio is present) When disabled, the system assumes that a High Definition audio connector is present in the system.
Legacy IDE Channels	Advanced > Drive Configuration	• PATA Pri only • PATA Sec only • PATA PRI and Sec • SATA P0/P1 only • SATA P0/P1, PATA Sec • SATA P0/P1, PATA Pri Options may vary depending on board model.	Configures PATA and SATA resources for OS requiring legacy IDE operation. *PATA = Parallel ATA* *SATA = Serial ATA*
Legacy USB Support	Advanced > USB Configuration	• Enabled • Disabled	Enables support for legacy USB.
Limit CPUID MaxVal	Advanced > Boot Configuration	• Enabled • Disabled	Enable for legacy operating systems to boot processors with extended CPUID functions.

Link Stability Algorithm	Advanced > PCI Express Configuration	• Enabled • Disabled	Used for verifying PCIe Link is up and running for x16 slot for x16 graphics cards and is part of the Intel Chipset BIOS Spec documentation for 915/925.
Load Custom Defaults	Exit	No changeable options	Loads the custom defaults for Setup options.
Load Optimal Defaults	Exit	No changeable options	Loads optimal defaults.
Location Info	Manageability	<Enter>	Press <Enter> to edit the location information for the client system. Location information is used to identify specific client computers in the server management console during client management, image/package management, and abnormal alerts processes. It is recommended that client information allow the administrator to easily identify the physical location of the computer.
Lowest Fan Speed	Advanced > Fan Control Configuration or Advanced > Boot Configuration	• Slow • Off	This option defines the fan speed at the lowest system temperature. **Slow** allows the system fans to continue to run at a reduced speed at low system temperatures. **Off** turns off the fans at low system temperatures.
Lowest System Fan Speed	Advanced > Fan Control Configuration or Advanced > Boot Configuration	• Slow • Off	This option defines the system fan speed at the lowest system temperature. **Slow** allows the fans to continue to run at a reduced speed at low system temperatures. **Off** turns off the system fans at low system temperatures.

M

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Manageability Feature	Intel® ME > Intel® Management Engine Configuration	• None • Intel® AMT • ASF	**Intel® AMT** enables Intel® Active Management Technology - for more information, refer to http://www.intel.com/go/amt/. **ASF** enables ASF Support - For more information, refer to http://www.intel.com/support/motherboards/desktop/sb/cs-010502.htm. Default value is **None**. With this setting, you are allowed to enable/disable onboard LAN.
Mark DMI Events As Read	Advanced > Event Log Configuration	[Enter]	Marks all DMI events in the event log as read.
Mark Events As Read	Advanced > Event Log Configuration	[Enter]	Clears all event logs and makes them accessible via software only.
Max CPUID Value Limit	Advanced > Boot Configuration	• Enabled • Disabled	Enable for legacy operating systems to boot processors with extended CPUID functions.

Maximum Capacity	Advanced > Drive Configuration > SATA/PATA	No changeable options	Displays the capacity of the drive.
MCH Temperature	Advanced > Hardware Monitoring	No changeable options	Displays temperature in the MCH zone. *Refer to the board's Technical Product Specification for the exact location of this sensor.*
MCH Voltage Override	Advanced > Chipset Configuration	• Default • 1.525V • 1.600V • 1.625V • 1.725V	Allows you to set the MCH V_CORE voltage. **Warning**: This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of the system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values.
Memory Configuration *This BIOS setting is present only on Desktop Boards that support ECC memory when ECC DIMMs are installed.*	Main	• Non-ECC • ECC	Allows you to turn error reporting on or off if the system and all the memory installed supports ECC (Error Correction Code).
Memory Correction *This BIOS setting is present only on Desktop Boards that support ECC memory when ECC DIMMs are installed.*	Advanced > Memory Configuration or Performance > Memory Overrides	• Non-ECC • ECC	Allows you to turn error reporting on or off if the system and all the memory installed supports ECC (Error Correction Code).
Memory Frequency	Advanced > Chipset Configuration or Advanced > Memory Configuration	Options depend on board model (can be from 333MHz to 800MHz)	Allows you to manually set the speed of your memory
Memory Mode	Main or Advanced > Memory Configuration	No changeable options	Displays single or dual channel operation. See support.intel.com for dual channel memory configurations
Memory Voltage	Performance > Memory Overrides	Multiple options ranging from 1.80 to 2.80	Allows you to override the memory voltage.
Microcode Revision	Maintenance	No changeable options	Lists the processor microcode revision installed on the desktop board.

Microsoft Away Mode	Power	• Enabled • Disabled	Enables or disables Microsoft Away Mode Power Management for Windows XP Media Center Edition. Contact Microsoft for device driver support. If Away mode is enabled, the computer enters Away mode instead of standby. The computer enters Away mode when you press the Power button on the remote control. This behavior also occurs when you press SLEEP on the keyboard. After the computer enters Away mode, the computer appears to be turned off. However, the computer is still running. For example, it can still perform functions such as record TV shows or serve Windows Media Extender sessions.
Mode	Advanced > Peripheral Configuration	• Output only • Bi-directional • EPP • ECP	Selects the mode for the parallel port. Not available if the parallel port is disabled. Output Only operates in AT*-compatible mode. Bi-directional operates in PS/2-compatible mode. EPP is Enhanced Parallel Port mode, a high-speed bi-directional mode for non-printer peripherals. ECP is Enhanced Capability Port mode, a high-speed bi-directional mode for printers and scanners.
Motherboard Temperature	Advanced > Hardware Monitoring	No changeable options	Displays temperature in the remote thermal sensor zone. *Refer to the board's Technical Product Specification for the exact location of this sensor.*

N

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Numlock	Advanced > Boot Configuration	• Off • On	Specifies the power-on state of the Numlock feature on the numeric keypad of the keyboard.
NX Technology	Security	• Enabled • Disabled	Enables or disables "No Execute" memory protection. For more information refer to http://www.intel.com/business/bss/infrastructure/security/xdbit.htm

O

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Obtain an IP Automatically	Manageability	• No • Yes	Select Yes to enable DHCP
Onboard 1394 *This BIOS setting is present only on Intel® Desktop Boards that include onboard IEEE 1394.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables the onboard IEEE 1394.

Onboard Audio *This BIOS setting is present only on Intel® Desktop Boards that include onboard audio.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables the onboard audio.
Onboard Chip SATA	Advanced > Drive Configuration	• IDE Controller • SATA Disabled	**IDE Controller** - both IDE and SATA channels will be detected. **SATA Disabled** - SATA channels will not be detected.
Onboard FDC Controller	Advanced > Floppy Configuration	• Enabled • Disabled	Enables or disables the floppy drive controller
Onboard LAN Boot ROM	Advanced > Peripheral Configuration	• Enabled • Disabled	Disables or enables booting from the network.
Onboard LAN *This BIOS setting is present only on Intel® Desktop Boards that include onboard LAN.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables the onboard LAN.
Onboard Video Memory Size	Advanced > Video Configuration	• 32MB • 64MB • 128MB • 256MB	Amount of system memory available for direct access by the graphics device.

P

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Parallel Port	Advanced > Peripheral Configuration	• Disabled • Enabled • Auto	Configures the parallel port. **Auto** assigns LPT1 the address 378h and the interrupt IRQ7. An * (asterisk) displayed next to an address indicates a conflict with another device.
Partial Intel® AMT Reset	Intel® ME > Intel® Management Engine Configuration	No changeable options	Resets Intel® AMT to defaults, except PSKs (PPS/PID keys) Intel® ME admin password, domain name, host name and provisioning server details. This option is only present if the system is Enterprise provisioned. If this option is chosen, no other changes to Intel® ME configuration will be allowed. You must save and exit before more changes can be made to Intel® ME.

PCI Burn-in Mode	Advanced > Chipset Configuration > Burn-in Mode	• Default • 36.36 MHz • 40.00 MHz	Enables the selection of specific PCI clock frequencies. **Warning:** This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of the system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values.
PCI Express Burn-in Mode *This BIOS setting is present only on Intel® Desktop Boards that include PCI Express slots.*	Advanced > Chipset Configuration > Burn-in Mode or Performance > Bus Overrides	• Default • 101.32 MHz • 102.64 MHz • 103.96 MHz • 105.28 MHz • 106.6 MHz • 107.92 MHz • 109.24 MHz	Enables the selection of specific PCI Express clock frequencies. **Warning**: This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of the system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values.
PCI IDE Bus Master	Advanced > Drive Configuration	• Disabled • Enabled	Allows a PCI device to initiate a transaction as a master.
PCI Latency Timer	Advanced > Chipset Configuration or Performance > Bus Overrides or Advanced > Memory Configuration	• 32 • 64 • 96 • 128 • 160 • 192 • 224 • 248	Sets PCI latency time.
PCI Slot x IRQ Priority	Advanced > PCI Configuration	• Auto • 3 • 5 • 9 • 10 • 11	Allows selection of IRQ priority.
PCI/VGA Palette Snoop	Advanced > Video Configuration	• Enabled • Disabled	Some special VGA cards, high-end hardware MPEG decoders etc. need to be able to look at the video card's VGA palette to determine what colors are currently in use. Enabling this feature turns on this palette "snoop". This option is only very rarely needed. It should be left at **Disabled** unless a video device specifically requires the setting enabled upon installation.
PCIE x16 Link Retrain *This BIOS setting may be present on Intel® Desktop Boards that include PCI Express slots.*	Advanced > PCI Express Configuration	• GFX Card • Disabled • Enabled	Used to adjust configuration for devices such as PCIe graphics cards which may need accommodations to function properly when link training. Some PCI Express cards may not be detected properly. Link retraining allows the system to keep trying to train or detect and configure the card. This setting will increase boot time.

PEG Allow > x1 *This BIOS setting is present only on Intel® Desktop Boards that include PCI Express slots.*	Advanced > Chipset Configuration > Burn-in Mode	• Enabled • Disabled	Enabling this option allows the system to link train PCI express devices of width x4, x8, and x16 in the GMCH x16 slot while leaving the Intel Integrated Graphics (PCIe graphics) enabled as well. With this option disabled, all devices plugged into the GMCH x16 slot will link train as x1 PCIe devices if the Intel Integrated Graphics (PCIe graphics) controller is enabled.
PEG Negotiated Width *This BIOS setting is present only on Intel® Desktop Boards that include PCI Express slots.*	Advanced > PCI Express Configuration	No changeable options	This option is read only and provides the link train width (x1, x4, x8, x16) of the PCIe device connected in the x16 PCIe slot. This information is provided for determining performance issues with x4, x8, and x16 PCIe cards if they are inserted into the x16 PCI slot while the Intel Integrated video (PCIe graphics) is enabled and the "PEG Allow > 1" option is disabled.
PIO Mode *This BIOS setting is present only if an IDE device is installed.*	Advanced > Drive Configuration > SATA/PATA	• Auto • 0 • 1 • 2 • 3 • 4	Specifies the PIO mode.
Plug & Play O/S	Advanced > Boot Configuration	• No • Yes	Specifies if manual configuration is desired. **No** lets the BIOS configure all devices in the system. This setting is appropriate when using a Plug and Play operating system. **Yes** lets the operating system configure Plug & Play (PnP) devices not require
Power Management	Power > APM	• Enabled • Disabled	Enables or disables the APM feature.
Preferred DNS Address	Intel® ME > Intel® Active Management Technology Configuration > TCP/IP Configuration	User defined	Enter the address in dot-decimal notation.
Primary Display Adapter	Advanced > Video Configuration	• PCI • Onboard • PCI-E	Allows selecting a specific video controller as the display device that will be active when the system boots.
Primary IDE Master	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this IDE channel. Shows [None] if no drive is installed.
Primary IDE Slave	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this IDE channel. Shows [None] if no drive is installed.
Primary Video Adapter	Advanced > Video Configuration	• Ext PCI Express Graphics • Ext PCI • Auto Options may vary depending on your configuration.	Allows selecting a specific video controller as the display device that will be active when the system boots.

Processor Fan Speed	Advanced > Hardware Monitoring	No changeable options	Displays processor fan speed.
Processor Speed	Main	No changeable options	Displays processor speed.
Processor Stepping	Maintenance	No changeable options	Lists the stepping of installed processor.
Processor Temp	Advanced > Hardware Monitoring	No changeable options	Displays processor zone temperature.
Processor Thermal Margin *This BIOS setting is present only on Intel® Desktop Boards with certain processors installed.*	Advanced > Hardware Monitoring	No changeable options	Displays the processor's thermal specification minus its current temperature, giving you a general indication of how much hotter it can get before it is running hotter than what it is designed to handle. Example: *Processor Thermal Margin = 10°C* This processor can get about 10°C hotter than it is currently running before it will exceed its thermal specification.
Processor Type	Main	No changeable options	Displays processor type.
Processor Zone Damping	Advanced > Fan Control	• High • Normal	To adjust acoustics for non-Intel® fan heatsink solutions. For more efficient fan heatsink solutions set the CPU Zone damping to **High**.
Processor Zone Response	Advanced > Fan Control	• Aggressive • Normal • Slow	To adjust acoustics for non-Intel® fan heatsink solutions. For less efficient fan heatsink solutions, set CPU Zone Response to **Aggressive.** For more efficient fan heatsink solutions, set the CPU Zone Response to **Slow.**
Processor Zone Temperature	Advanced > Hardware Monitoring	No changeable options	Displays processor zone temperature.
Provisioning Mode	Intel® ME > Intel® Active Management Technology Configuration > Provisioning Configuration	• Enterprise • Small-Medium Business	Configures the Intel® AMT provisioning mode. **Enterprise** mode supports both HTTP Digest and TLS security, however this mode requires a provisioning server to function. **Small-Medium Business** mode supports HTTP Digest only (no TLS support).
Provisioning Server Address	Intel® ME > Intel® Active Management Technology Configuration > Provisioning Configuration	User defined	Enter the address of the Provisioning Server in dot-decimal notation.
Provisioning Server Port	Intel® ME > Intel® Active Management Technology Configuration > Provisioning Configuration	User defined	Enter the port of the Provisioning Server. Port number range 0 - 65535.
PXE Boot to LAN	Boot	• Enabled • Disabled	Disables or enables PXE boot to LAN.

R

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Ratio Actual Value	Maintenance	No changeable options	Displays processor's Bus Ratio.
Rear Audio Optical Output	Advanced > Peripheral Configuration	• Enabled • Disabled	If enabled, sends digital audio from the external TOSLINK to the internal header
Rear Fan Speed	Advanced > Hardware Monitoring	No changeable options	Displays rear fan speed.
Recover to Checkpoint	Manageability	<Enter>	Press <Enter> to display available checkpoints. Select the checkpoint to restore, and then press F10 to save and exit. Allows you to reverse any changes made since the creation of any of the checkpoints currently on the computer. A Checkpoint is a saved status of the client hard disk. When the Intel® Platform Administrator Client is enabled, the user can create a checkpoint to save the current status for future recovery.
Remote Temp	Advanced > Hardware Monitoring	No changeable options	Displays the temperature of the onboard remote thermal diode.
Removable Device Priority	Boot	Lists all installed removable devices	Allows you to set the boot order of removable devices (floppy drives, USB thumb drives, etc)
Removable Devices	Boot	No changeable options	Opens the Removable Devices sub-menu where you may specify the boot sequence from the available removable devices.
Removable Drive Order	Boot	Lists all installed removable devices	Allows you to set the boot order of removable devices (floppy drives, USB thumb drives, etc) - used when Boot Menu type is set to normal.
Reset Intel® AMT to default factory settings	Maintenance	No changeable options	Resets Intel® AMT to the default factory settings.

S

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
S.M.A.R.T.	Advanced > Drive Configuration > SATA/PATA	• Auto • Disable • Enable	Enable or Disable support for the hard disk's S.M.A.R.T. (Self Monitoring Analysis And Reporting Technology) capability. S.M.A.R.T. is supported by all current hard disks and allows the early prediction and warning of impending hard disk failures. You should enable it if you want to use S.M.A.R.T.-aware utilities to monitor the hard disk's condition.
SATA AHCI Mode	Advanced > Drive Configuration	• Enabled • Disabled	Enables the SATA controllers in an "Advanced Host Controller Interface" mode that improves system performance if the drives attached support AHCI. This setting will be auto enabled if the onboard RAID controller is enabled. NOTE: This changes the device class of the SATA controllers and can cause driver reload in the OS.

Save and Commit Settings	Intel® ME		Save and commit changes made to Intel® ME or Intel® AMT.
Save Custom Defaults	Exit	No changeable options	Saves the current values as custom defaults. Normally, the BIOS reads the Setup values from flash memory. If this memory is corrupted, the BIOS reads the custom defaults. If no custom defaults are set, the BIOS reads the factory defaults.
Scan User Flash Area	Boot	• Disabled • Enabled	Enables the BIOS to scan the flash ROM for user binary files that are executed at boot time.
SDRAM CAS# Latency	Advanced > Chipset Configuration or Advanced > Memory Configuration	• 2.0 • 2.5 • 3.0	Selects the number of clock cycles required to address a column in memory. Corresponds to CL.
SDRAM Frequency	Advanced > Chipset Configuration or Advanced > Memory Configuration	• Auto • 266 MHz • 333 MHz • 400 MHz	Allows override of detected memory frequency value.
SDRAM RAS Act. To Pre.	Advanced > Chipset Configuration or Advanced > Memory Configuration	• 8 • 7 • 6 • 5	Selects length of time from read to pre-change. Corresponds to tRAS, min.
SDRAM RAS# Precharge	Advanced > Chipset Configuration or Advanced > Memory Configuration	• 4 • 3 • 2	Selects the length of time required before accessing a new row.
SDRAM RAS# to CAS# delay	Advanced > Chipset Configuration or Advanced > Memory Configuration	• 4 • 3 • 2	Selects the number of clock cycles between addressing a row and addressing a column. Corresponds to tRCD.
SDRAM Timing Control	Advanced > Chipset Configuration or Advanced > Memory Configuration	• Auto • Manual – Aggressive • Manual – User Defined	***Auto*** *allows timings to be programmed according to the memory detected.* ***Manual – Aggressive*** *selects the most aggressive user defined timings.* ***Manual – User Defined*** *allows manual override of detected SDRAM settings.*

Second SATA Master	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this SATA channel. Shows [None] if no drive is installed.
Secondary IDE Master	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this IDE channel. Shows [None] if no drive is installed.
Secondary IDE Slave	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this IDE channel. Shows [None] if no drive is installed.
Secondary SATA Controller Mode *This BIOS setting is present only on Intel® Desktop Boards that include a secondary SATA controller.*	Advanced > Peripheral Configuration	• IDE • RAID	Sets the mode for the secondary SATA controller. If RAID is selected, the Marvell* RAID driver must be installed
Secondary SATA Controller *This BIOS setting is present only on Intel® Desktop Boards that include a secondary SATA controller.*	Advanced > Peripheral Configuration	• Enabled • Disabled	Enables or disables the secondary SATA controller.
Secondary Video Adapter	Advanced > Video Configuration	• Ext PCI Express Graphics • Ext PCI • Auto Options may vary depending on your configuration.	Allows selecting a specific video controller as the secondary display device.
Security Option	Security	• Setup • System	If you set a Supervisor or User password, selects whether the password is required every time the system boots or only when you enter Setup
Serial Port A	Advanced > Peripheral Configuration	• Disabled • Enabled • Auto	Configures serial port A. **Auto** assigns the first free COM port, normally COM1, the address 3F8h, and the interrupt IRQ4. An * (asterisk) displayed next to an address indicates a conflict with another device.
Set PRTC	Intel® ME > Intel® Active Management Technology Configuration > PRTC Configuration	User defined	Sets the Intel® AMT PRTC (Protected Real Time Clock). Enter PRTC in Greenwich Mean Time (GMT) format.
Set Supervisor Password	Security	Password can be up to seven alphanumeric characters.	Specifies the supervisor password.

Set Supervisor Password	Security	Password can be up to seven alphanumeric characters.	Specifies the Supervisor password. The supervisor password gives unrestricted access to view and change all Setup options. If only the supervisor password is set, pressing <Enter> at the password prompt of Setup gives the user restricted access to Setup. If both the supervisor and user passwords are set, you must enter either the supervisor password or the user password to access Setup. Setup options are then available for viewing and changing depending on whether the supervisor or user password was entered.
Set User Password	Security	Password can be up to seven alphanumeric characters.	Specifies the user password.
Set User Password	Security	Password can be up to seven alphanumeric characters.	Specifies the User password. Setting a user password restricts who can boot the computer. The password prompt is displayed before the computer is booted. If only the supervisor password is set, the computer boots without asking for a password. If both passwords are set, you can enter either password to boot the computer.
Silent Boot	Boot	• Enabled • Disabled	**Disabled** displays normal POST messages. **Enabled** displays OEM logo instead of POST messages.
SOL/IDER Authentication Mode	Intel® ME > Intel® Active Management Technology Configuration > SOL/IDER Configuration	• Kerberos only • User Name and Password	Selects how IDER and SOL operation verify and secure interfaces on LAN
Subnet Mask	Intel® ME > Intel® Active Management Technology Configuration > TCP/IP Configuration	User defined	Enter the address in dot-decimal notation.
Subnet Mask *This setting editable only if Obtain an IP Automatically is set to **No**.*	Manageability	<Enter>	Press <Enter> to edit the subnet mask for the client system.
Supervisor Password	Security	No changeable options	Reports if there is a Supervisor password set.
SW Single Processor Mode *This BIOS setting is present only on Intel® Desktop Boards that include support for dual core processors when a dual core processor is installed.*	Main	• Enabled • Disabled	Sets the processor mode for dual core processors. **Disabled:** Dual Core processor will run in Dual Core mode. **Enabled:** Dual Core processor will NOT run in Dual Core mode.

System Bus Speed	Main	No changeable options	Displays the system bus speed.
System Date	Main	Month, day, year	Specifies the current date.
System Fan Control	Advanced > Boot Configuration	• Enabled • Disabled	Allows the system fans to be controlled in order to optimize acoustics . If disabled, system fans will run at 100%.
System Fan Speed	Advanced > Hardware Monitoring	No changeable options	Displays system fan speed
System Memory Speed	Main	No changeable options	Displays the system memory speed.
System Time	Main	Hour, minute, and second	Specifies the current time.
System Zone 1 Temperature	Advanced > Hardware Monitoring	No changeable options	Displays system zone 1 temperature. *Refer to the board's Technical Product Specification for the exact location of this sensor.*
System Zone 2 Temperature	Advanced > Hardware Monitoring	No changeable options	Displays system zone 2 temperature. *Refer to the board's Technical Product Specification for the exact location of this sensor.*

T

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Third SATA Master	Advanced > Drive Configuration	*[drive]*	Displays the drive installed on this SATA channel. Shows [None] if no drive is installed.
TLS Pre-Shared Key (PSK) PID	Intel® ME > Intel® Active Management Technology Configuration > Provisioning Configuration	User defined	The PID is an 8 character alpha-numeric string in dash-separated format, e.g. ABCD-123K. Both PID and PPS must be set to provide the ability to establish a secure TLS-PSK session.
TLS Pre-Shared Key (PSK) PPS	Intel® ME > Intel® Active Management Technology Configuration > Provisioning Configuration	User defined	The PPS is a 32 character alpha-numeric string in dash-separated format, e.g. EGET-GZFF-C6A6-ORRR-HQXP-C9JI-RJGB-KBS8. Both PID and PPS must be set to provide the ability to establish a secure TLS-PSK session.
Total Memory	Main or Advanced > Memory Configuration	No changeable options	Displays the total amount of RAM.
Trusted Platform Module *This BIOS setting is present only on Intel® Desktop Boards that include support for Trusted Platform Module (TPM).*	Advanced > Peripheral Configuration	• Enabled • Disabled	Disables or enables Trusted Platform Module (TPM)

Turn on Intel® ME in Sleep States	Intel® ME > Intel® Management Engine Configuration	• Never/Disabled • Always/Enabled	This option determines the ACPI state that Intel® ME is in when in ACPI sleep states. **Never** disables management in ACPI sleep states. **Always** enables management in ACPI sleep states.
Type	Advanced > Drive Configuration > SATA/PATA	• Auto • User	Specifies the IDE configuration mode for IDE devices. **Auto** fills-in capabilities from ATA/ATAPI device. **User** allows capabilities to be changed.

U

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
UEFI boot	Boot	• Enabled • Disabled	Enables or disables Unified Extended Firmware Interface (UEFI) Boot. For more information, refer to: http://www.uefi.org/home
Unlock Intel(R) QST	Advanced > Fan Control Configuration	• No • Yes	Yes option allows the fan control settings to be changed using software.
USB 2.0	Advanced > USB Configuration	• Enabled • Disabled	**Disabled** will turn off all USB functionality. This feature can be used for security purposes.
USB 2.0 Legacy Support	Advanced > USB Configuration	• Full-Speed • Hi-Speed	Configures the USB 2.0 legacy support to Full-Speed (12 Mbps) or Hi-Speed (480 Mbps).
USB Boot	Boot	• Enabled • Disabled	Disables or enables booting from USB boot devices.
USB Controller	Advanced > USB Configuration	• Enabled • Disabled	Disables or enables USB functionality.
USB Device Bootable	Boot	• Enabled • Disabled	Disables or enables booting from USB boot devices.
USB EHCI Controller	Advanced > USB Configuration	• Enabled • Disabled	Enables or disables high-speed USB transfers (USB 2.0)
USB Function *This BIOS setting is present only when the BIOS configuration jumper is set to Maintenance mode.*	Advanced > USB Configuration	• Enabled • Disabled	Disables or enables USB functionality. If Disabled, the Advanced > USB Configuration menu will NOT include any changeable options. The menu will appear blank.
USB Legacy	Advanced > USB Configuration	• Enabled • Disabled	USB Legacy support allows the BIOS to interact with a USB keyboard, and in limited cases, a USB mouse.
USB Mass Storage Emulation Type	Boot	• Auto • All Removable • All Fixed Disc • Size	Allows you to set the emulation type for USB drives. **Auto** - relies on USB device design and media format to set emulation type. **All Removable** - set USB mass devices to emulate removable drives. Master Boot Record format needed for USB mass device. **All Fixed Disc** - sets USB mass devices to emulate fixed discs. **Size** - sets emulation type based on media size.
USB Ports	Advanced > USB Configuration	• Enabled • Disabled	Enables or disables all USB ports.

USB ZIP Emulation Type	Advanced > USB Configuration	• Floppy • Hard Disk	Allows you to set the emulation type for USB Zip drives
Use Automatic Mode	Advanced > Drive Configuration	• Enabled • Disabled	Allows you to manually set the bootable devices configuration for legacy operating systems (OS). Legacy OS may only allow 4 devices, which means you must choose to use the IDE controller as one of your 4 devices.
Use Maximum Multiplier	Maintenance	• Automatic • Disabled	Only for unlocked processors: either sets CPU speed to minimum rated multiplier or rated multiplier (Speed)
User access Level *This BIOS setting is present only if a supervisor password has been set.*	Security	• Limited • No Access • View Only • Full	Sets BIOS Setup Utility access rights for user level.
User confirmation required	Security	• No • Yes	Select whether user confirmation is required to perform changes using VA Configuration Interface. Valid for VA 3.0 only. For more information, refer to: http://www.intel.com/technology/magazine/computing/vPro-security-0906.htm
User Password	Security	No changeable options	Reports if there is a user password set.

V

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
VA Configuration Interface	Security	• Lock • Unlock	Lock or unlock VA Configuration Interface. If locked, all interface functions will return error. Valid for VA 3.0 only. For more information, refer to: http://www.intel.com/technology/magazine/computing/vPro-security-0906.htm
VA Operation	Security	• Enabled • Disabled	Enable or disable Virtual Appliance (VA) operation. Valid for VA 3.0 only. For more information, refer to: http://www.intel.com/technology/magazine/computing/vPro-security-0906.htm
Vccp or VCC	Advanced > Hardware Monitoring	No changeable options	Displays voltage level of the VCCP in supply
VCORE Voltage	Advanced > Hardware Monitoring	No changeable options	Displays the operating voltage of the processor.
Video Repost *This BIOS setting is present only when ACPI Suspend State is set to S3.*	Power > ACPI	• Enabled • Disabled	Allows the video BIOS to be initialized coming out of the S3 state. Some video controllers require this option to be enabled.
View Event Log	Advanced > Event Log Configuration	[Enter]	Press Enter to show all DMI Event logs.

VT Technology	Security	• Enabled • Disabled	Enables or disables Virtualization Technology. For more information refer to http://www.intel.com/technology/virtualization/index.htm

W

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
Wake on LAN from S5 *This BIOS setting is present only on Intel® Desktop Boards that include onboard LAN.*	Power > ACPI	• Stay Off • Power-On	In ACPI soft-off mode only, determines how the system responds to a LAN wake up event when the system is in the ACPI soft-off mode.
Wake on Modem Ring	Power	• Stay Off • Power-On	Specifies how the computer responds to an incoming call on an installed modem when the power is off.
Wake on PCI PME	Power	• Stay Off • Power-On	Determines how the system responds to a PCI PME wake up event.
Wake on PS/2 Mouse from S3	Power	• Stay Off • Power-On	Determines how the system responds to a PS/2 mouse wake up event.
Wake system from S5	Power	• Enabled • Disabled	Enable or disable System wake on alarm event. When enabled, system will wake on the day/hour/minute/second specified.
Watchdog Timer	Advanced > Chipset Configuration	• Enabled • Disabled	Enables or disables Watchdog timer.

X

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
XD Technology	Security	• Enabled • Disabled	Enables or disables "No Execute" memory protection. For more information refer to http://www.intel.com/business/bss/infrastructure/security/xdbit.htm

Z

BIOS Setting	Appears on BIOS Screen…	Options	Description / Purpose
ZIP Emulation Type	Boot	• Floppy • Hard Disk	Allows you to set the emulation type for USB Zip drives